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U1S S1105

(56) Documents Cited

GB 0931533 A

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US 4250990 A

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US 3797642 A

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## (54) Infusion bag handling devices

(57) An infusion bag handling device 151 includes a lid 152 having a lip 602 and a pair of plate members pivotally connected together. The plate members comprise two sections of the lid of a cup. An infusion bag is attached to the lid with an elongate flexible element such as string 160. In use, a user places the infusion bag in a container of hot liquid to allow infusion to take place, after which the infusion bag is withdrawn upwardly by pulling on the string 160 until the infusion bag engages the plate members thus allowing the user to press the plate members towards one another and thereby squeeze the infusion bag allowing the excess liquid to return to the container.

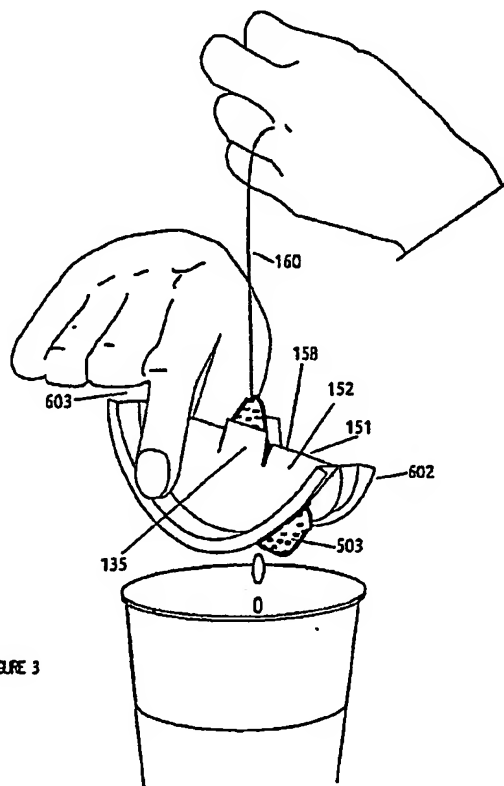


FIGURE 3

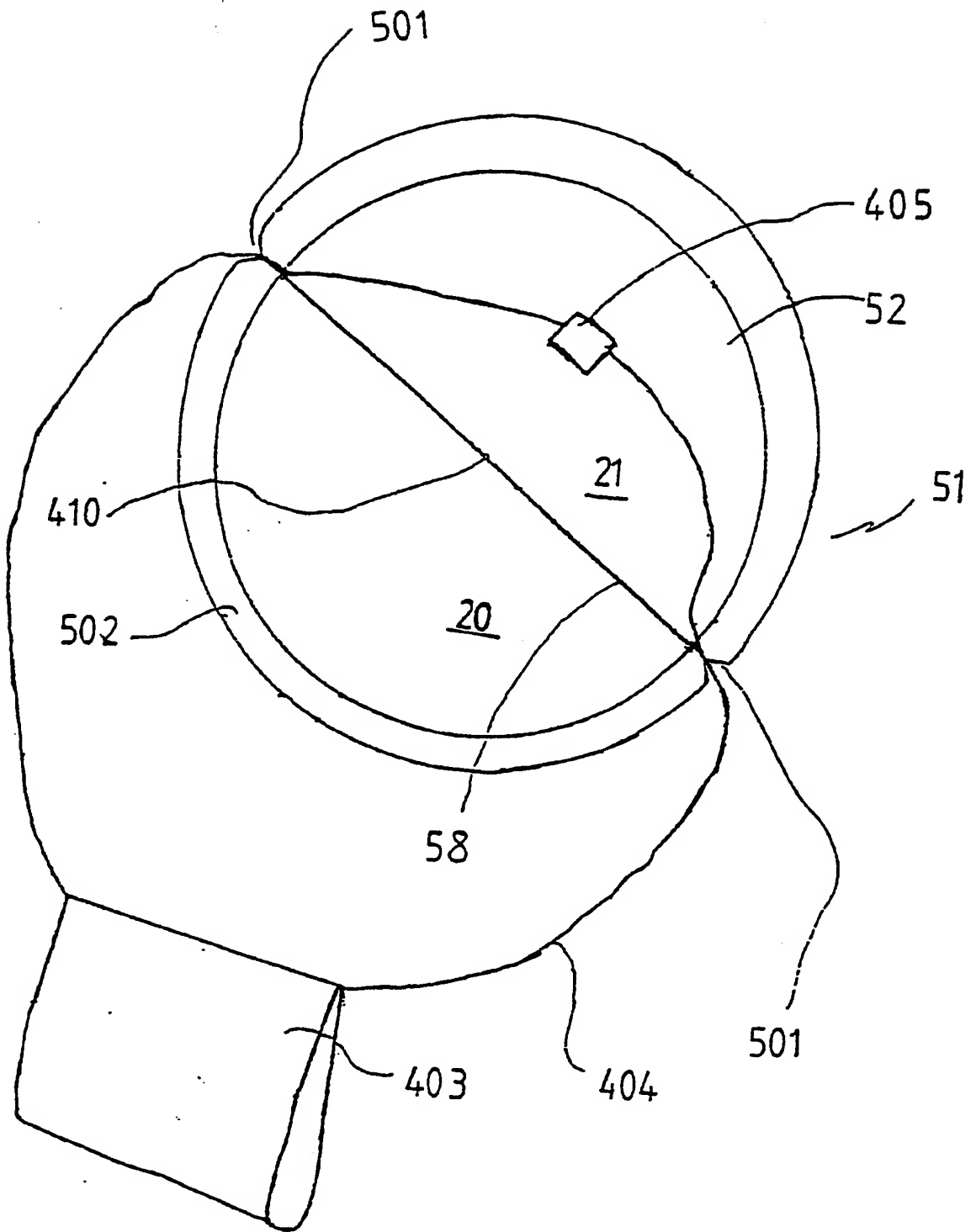


FIGURE 1

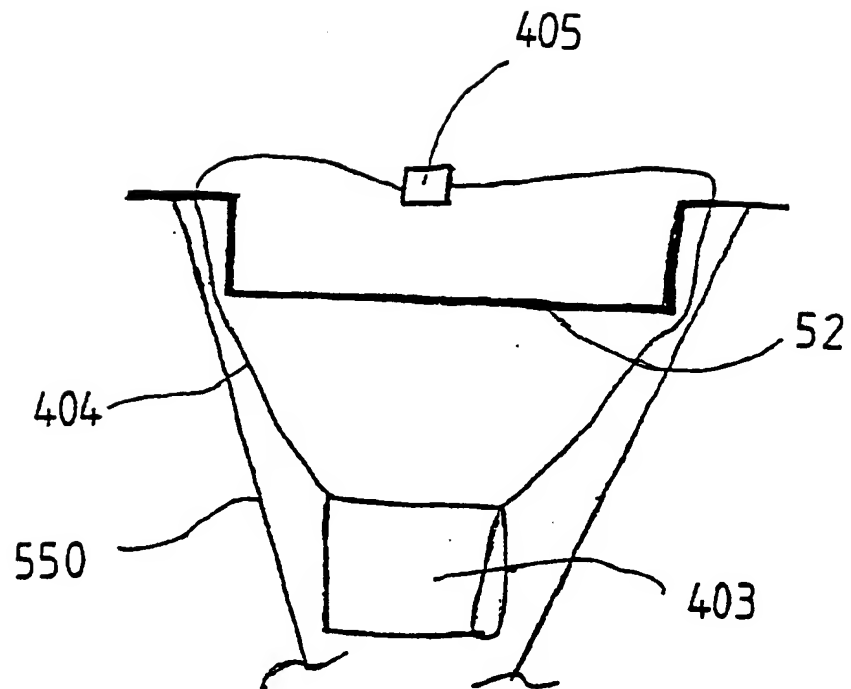


FIGURE 1a

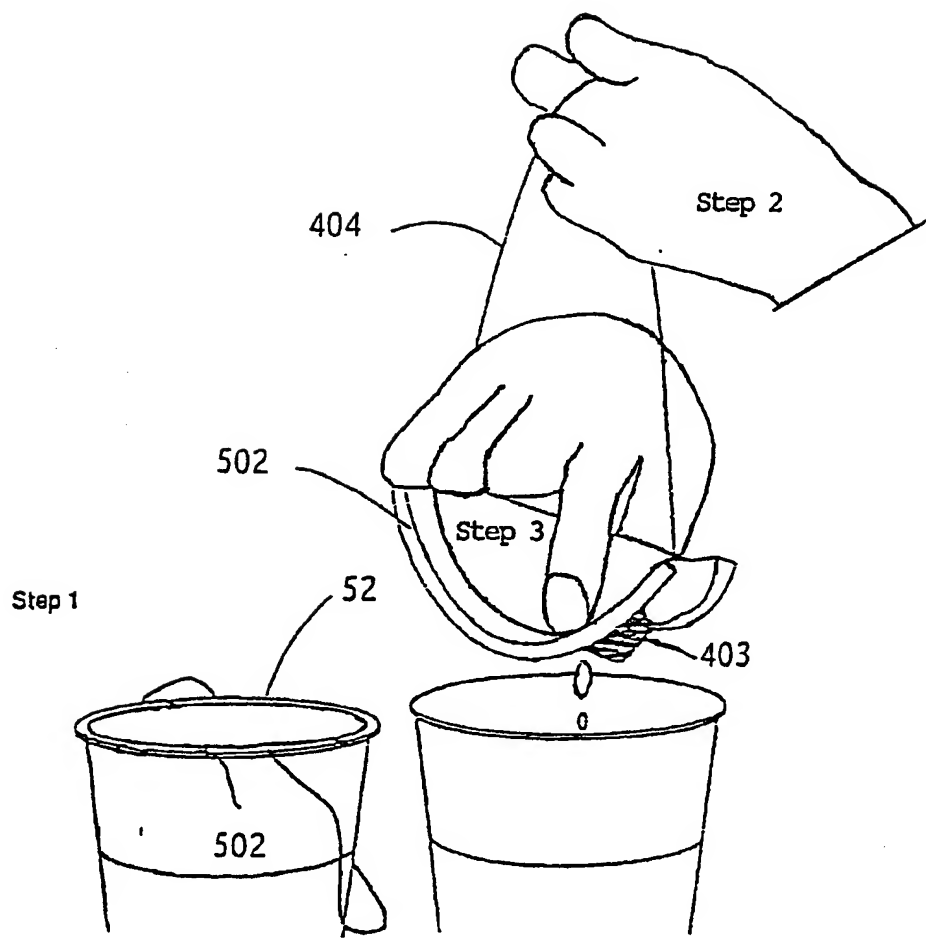


FIGURE 2a

FIGURE 2

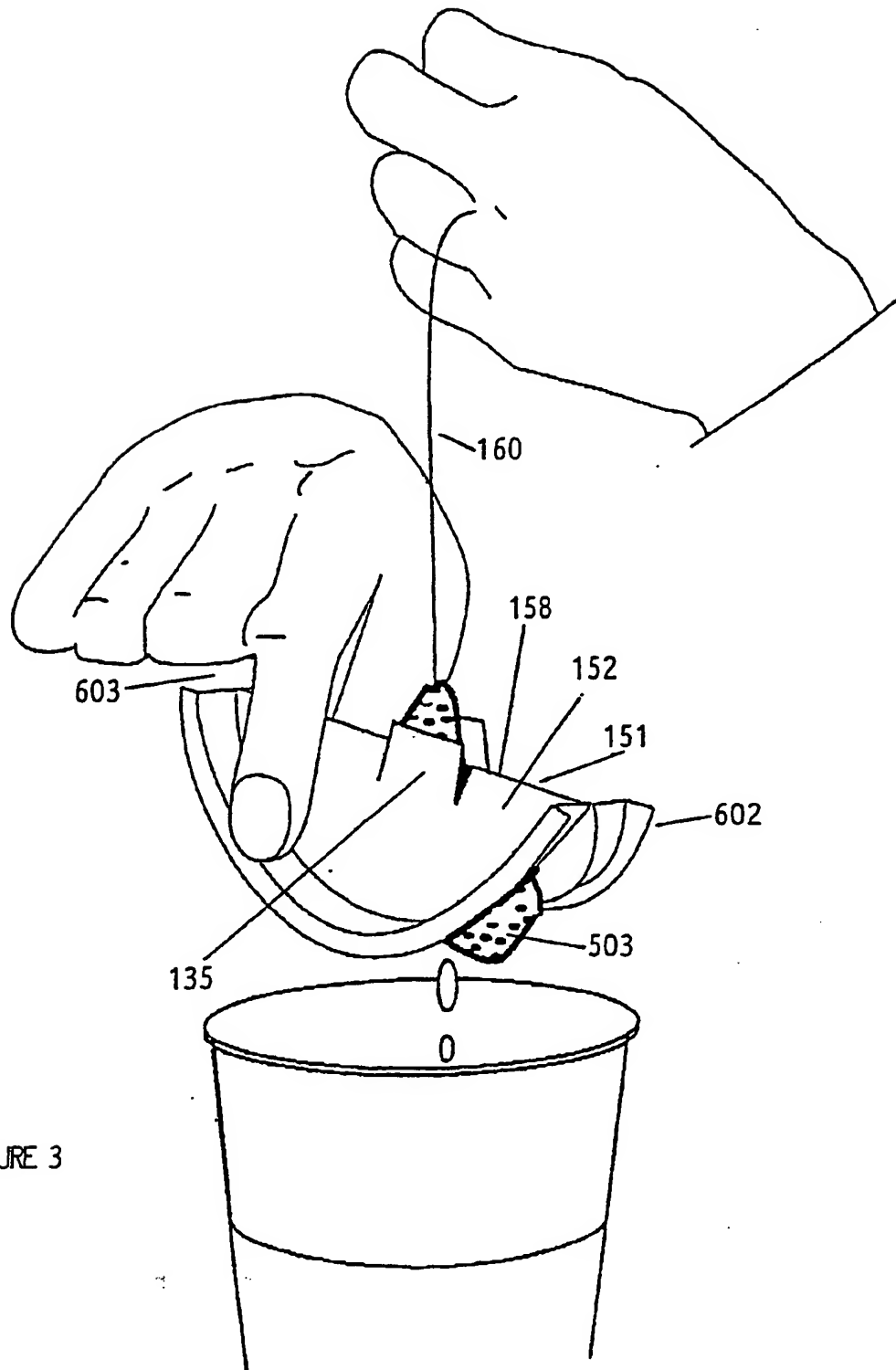


FIGURE 3

FIGURE 4

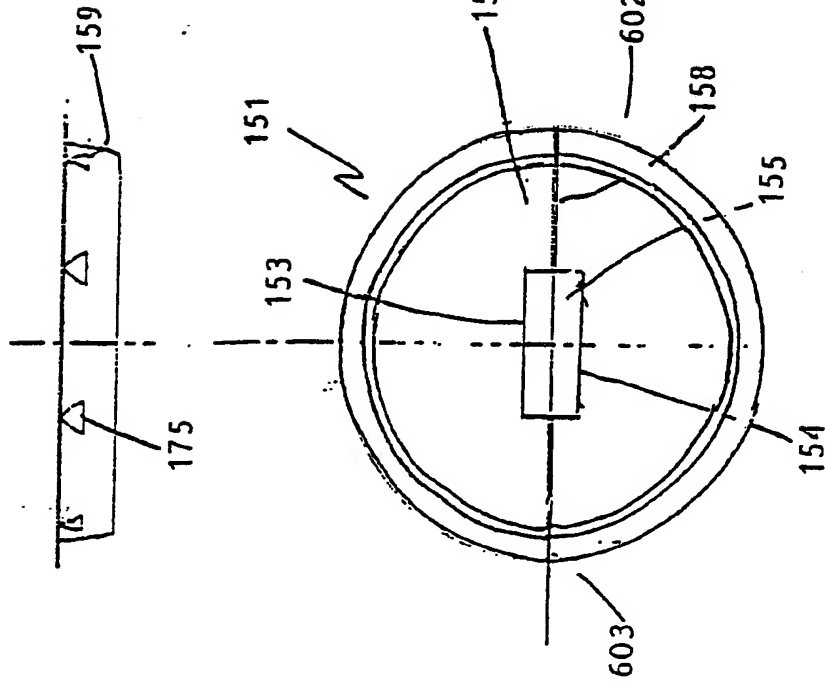


FIGURE 4a

FIGURE 4c

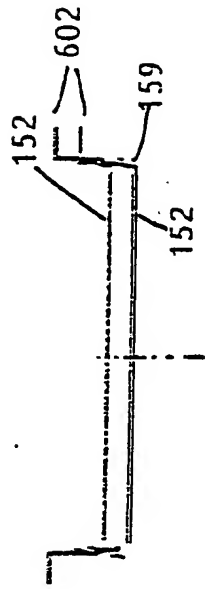
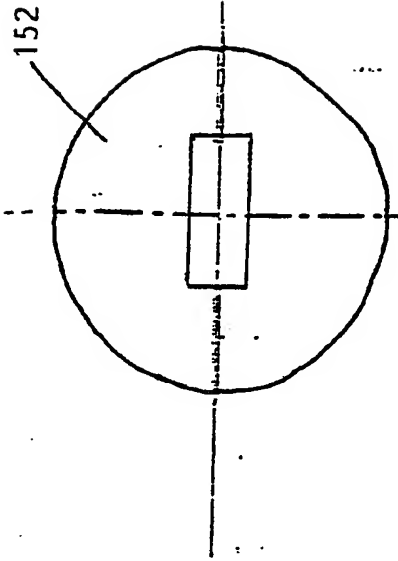


FIGURE 4b



IMPROVEMENTS IN AND RELATING TO INFUSION  
BAG HANDLING DEVICES

5 The present invention relates to an infusion bag handling device and particularly to a tea-bag handling device.

10 Generally, a tea-bag for use in brewing a cup of tea which is to be sold in a restaurant, cafe, fast-food outlet or such like includes a string which is attached to the tea-bag and further includes a folded piece of paper attached to the other end of the string. Boiling water is poured onto the tea-bag in a cup and the tea-bag is allowed to remain in the water for sufficient length of time so as to allow infusion to occur. The customer then grips the  
15 piece of paper which is left hanging over the edge of the cup and by pulling upwardly on the paper and string raises the tea-bag out of the liquid. The customer then usually lifts the used tea-bag over the rim of the cup and discards the bag.

20 Removal of the used tea-bag from the water in this way has the disadvantage that drops of hot water dribble onto the table and possibly onto a customer's hands and clothes thereby creating an unpleasant mess.

25 The present invention seeks to alleviate the disadvantages associated with the tea-bag of the prior art.

30 The present invention accordingly provides an infusion bag handling device including a lid having a pair of plate members pivotally connected together, the plate members comprising two sections of the lid of a cup, and means for attaching an infusion bag to the lid with an elongate flexible element such as string, whereby in use, a user  
35 places the infusion bag in a container of hot liquid to

allow infusion to take place, after which the infusion bag is withdrawn upwardly by pulling on the flexible element until the infusion bag engages the plate members thus  
5 allowing the user to press the plate members towards one another and thereby squeeze the infusion bag allowing the excess liquid to return to the container.

Advantageously, the device includes a pivot element  
10 integrally formed on the lid between the plate members.

Advantageously, the pivot element is impressed on the surface of the lid so that the plate members may be easily folded over onto each other.

15 The pivot element is conveniently impressed along a diameter of the lid.

The lid may include a lip which is adapted to protrude over  
20 the rim of the cup when the lid is positioned on the mouth of the cup.

There may preferably be notches included on the lip, the notches assisting in folding the plate members over onto  
25 each other during use.

The invention will now be described more particularly with reference to the accompanying drawings, which show by way of example only, two embodiments of an infusion bag  
30 handling device according to the invention.

In the drawings:

Figure 1 is a plan view of one embodiment of infusion  
35 device;



Figure 1a is a sectional view of the device shown in Figure 1;

Figure 2 and Figure 2a are perspective views respectively  
5 of the first embodiment in use and mounted on a cup;

Figure 3 is a perspective view of the second embodiment of infusion device; and

10 Figures 4, 4a, 4b and 4c are respectively a side view, a plan view from above, a plan view of a lid forming part of the second embodiment and a cross-sectional view through one lid stacked on another.

15 Referring now to Figures 1, 1a, 2 and 2a, the first embodiment of the infusion device will be described. In this embodiment, the infusion device 51 includes a lid 52, a lip 502, notches 501, and a pivot line 58. The pivot line 58 extends across the lid 52 but does not extend onto  
20 the lip 502. Cuts are provided on the notches 501 up to the inner circumference of the lid 52 including along the vertical walls, so as to allow for pivoting of the lid 52.

With the lid 52 placed over the mouth of a cup 550, the lip  
25 502 protrudes over the rim of the cup.

In use, when infusion has occurred, a user may grasp the grip 405 and pull it upwardly in the manner described above. When the tea-bag 403 has been pulled upwardly and  
30 is in contact with the lid 52, it may be lifted out of the mouth of the cup by means of lip 502. The lid 52 is then squeezed so that sections 20, 21 are forced inwardly towards each other, thereby squeezing the tea-bag 403 which is held therebetween.

Although, not visible in the drawings, a small circular orifice is provided at the point of each V-shaped notch 501 to prevent the material of the device tearing along the pivot line 58. Also, these holes allow the thread or string 404 to move more smoothly through the notches 501.

In the second embodiment shown in Figures 3, 4, 4a, 4b and 4c, the infusion device 151 includes a lid 152, a lip 602 and a pivot line 158. The pivot line 158 extends across the lid 152 but does not extend onto the lip 602. Straight cuts 603 are provided on the lip 602 up to the inner circumference of the lid 152 including along the sloped walls 159 so as to allow for pivoting of the lid 152.

Centrally located in the lid 152 is an aperture covered by a pair of pivotable flaps 155, pivotable along the lines 153 and 154. To use the infusion device, the free end of the string 160 is threaded between the two flaps 155. The device is then used in a similar manner to the first embodiment expect that when the string 160 is pulled upwardly, a portion of the tea-bag 503 extends through the aperture between the pair of flaps 155.

Scallops 175 are provided about the outer wall 159 of the lid 152 to prevent the lids from completely nesting in each other when stacked.

The embodiments of infusion bag handling device according to the invention may be manufactured from any suitable material which will insulate a person's fingers from a hot tea-bag such as, for example, plastics material or paper.

It will of course be understood that the invention is not limited to the specific details described herein which are given by way of example only, and that various

modifications and alterations are possible within the scope of the invention as defined in the appended claims.

CLAIMS:

1. An infusion bag handling device including a lid having a pair of plate members pivotally connected together, the  
5 plate members comprising two sections of the lid of a cup, and means for attaching an infusion bag to the lid with an elongate flexible element such as string, whereby in use, a user places the infusion bag in a container of hot liquid to allow infusion to take place, after which the infusion  
10 bag is withdrawn upwardly by pulling on the flexible element until the infusion bag engages the plate members thus allowing the user to press the plate members towards one another and thereby squeeze the infusion bag allowing the excess liquid to return to the container.
- 15 2. An infusion bag handling device as claimed in Claim 1, which includes a pivot element integrally formed on the lid between the plate members.
- 20 3. An infusion bag handling device as claimed in Claim 2, in which the pivot element is impressed on the surface of the lid so that the plate members may be easily folded over onto each other.
- 25 4. An infusion bag handling device as claimed in Claim 3, in which the pivot element is impressed along a diameter of the lid.
- 30 5. An infusion bag handling device as claimed in any one of the preceding claims, in which the lid comprises a lip which is adapted to protrude over the rim of a cup when the lid is positioned on the mouth of the cup.
- 35 6. An infusion bag handling device as claimed in Claim 5, in which the notches or cuts are included on the lip, the

notches or cuts facilitating the folding of the plate members over onto each other during use.

5 7. An infusion bag handling device as claimed in any one of the preceding claims, in which the flexible element extends through an aperture in the lid.

10 8. An infusion bag handling device as claimed in any one of Claims 1 to 6, in which the flexible element is looped about the outer edge of the lid.

15 9. An infusion bag handling device substantially in accordance with either of the embodiments herein described with reference to and as shown in the accompanying drawings.

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**Relevant Technical Fields**

(i) UK Cl (Ed.M) A4E (E140) B8K (KAA) B8T (TRE)

(ii) Int Cl (Ed.5) A47G 19/14, 19/16, 21/10 B65D 81/00 A47J  
31/06; 31/48

**Databases (see below)**

(i) UK Patent Office collections of GB, EP, WO and US patent specifications.

(ii) ONLINE DATABASE: WPI

Search Examiner  
K J KENNETT

Date of completion of Search  
6 DECEMBER 1994

Documents considered relevant  
following a search in respect of  
Claims :-  
1-9

**Categories of documents**

- |   |   |
|---|---|
| <b>X:</b> Document indicating lack of novelty or of inventive step.   | <b>P:</b> Document published on or after the declared priority date but before the filing date of the present application.        |
| <b>Y:</b> Document indicating lack of inventive step if combined with one or more other documents of the same category. | <b>E:</b> Patent document published on or after, but with priority date earlier than, the filing date of the present application. |
| <b>A:</b> Document indicating technological background and/or state of the art.   | <b>&amp;:</b> Member of the same patent family; corresponding document.   |

Category	Identity of document and relevant passages	Relevant to claim(s)
Y	GB 931533 (WESTON) whole document	1
A	US 4735810 (DACAL) Figures 4-6	1
X,Y	US 4250990 (CASPER) whole document	1-5, 7
Y	US 3797642 (DOBRY) column 3 lines 29-34	1
X	US 3861284 (COSTELLO) Figures 2-4	1, 5, 7, 8

Databases: The UK Patent Office database comprises classified collections of GB, EP, WO and US patent specifications as outlined periodically in the Official Journal (Patents). The on-line databases considered for search are also listed periodically in the Official Journal (Patents).